ASTARTE DVDEXPORT

Macintosh

and

Windows

Versions

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For any questions about the manual, the software or our company please contact:
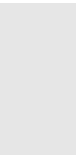
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DVDEXPORT

SETTINGS & WINDOWS

DVDEXPORT

What is DVDExport?

ASTARTE DVDExport an Xtra™ for Macromedia® Director® which allows you to create basic DVD-Video titles. Using the familiar Director workspace, you can create DVD menus, add buttons to create interactivity and link them to video and audio clips. The finished output of DVDExport is saved on your hard disk as a set of files which are ready to be written to a DVD disc or sent to a pressing plant for replication. Once on disc, your project is a standard DVD-Video disc which can be played on a set-top player or a DVD-equipped computer.

For more complex projects, the work you do with DVDExport can be imported into our full-featured authoring tool: DVDirector™ to add multiple languages, subtitles, etc.

About This Manual

This manual is for both the Macintosh and Windows versions of DVDExport. The pictures shown are from the Mac version, but all the controls, functionality and procedures are the same in the Windows version.

Although DVDExport is easy to use for experienced Macromedia Director users, it's really a good idea to read this manual. It covers some features and functions that you might not discover if you just "dive in".

Also, be sure to read the manuals that come with the ASTARTE M.Pack or PixelTools Expert-DVD encoding software and Adaptec ToastDVD (Mac only).

> *If you don't know about Macromedia concepts like sprites, markers, the score, and the stage, you should definitely read the Director manual first, before you attempt to use DVDExport.*

The manual is organized so you can easily find the information you want:

- This chapter tells you how to install DVDExport, and gives a general overview of DVD creation.
- The next chapter "Settings & Windows" beginning on page 19 covers each window, dialog and menu in DVDExport in detail.
- "Creating Your First DVD Video" beginning on page 30 takes you through the entire process of creating a simple DVD using DVDExport.

Please pay special attention to information highlighted with these symbols:

The **Checkmark** *points out useful information that can enhance your use of ASTARTE DVDExport.*

The **Alert symbol** *calls your attention to very important information relating to the proper functioning of this product.*

Compatibility & System Requirements

Apple MacOS®:

- **PowerPC**, with at least **64 MB** of free memory. (at least 48 MB assigned to MacroMedia Director)
- **System 8.1** or higher
- **QuickTime™ 3** or higher
- **Macromedia™ Director** 6.5 or 7.0.2 and higher
- **An MPEG decoder** if you want to playback MPEG-2 files
- **Adequate hard disk space** to hold your source movies and the encoded movies

Windows®:

- **Pentium II/250**, with at least **64 MB** of free memory.
- **Windows 95, 98 or NT**
- **QuickTime™ 3** or higher
- **Macromedia™ Director** 6.5 or 7.0.2 and higher
- **An MPEG decoder** if you want to playback MPEG-2 files
- **Adequate hard disk space** to hold your source movies and the encoded movies

DVD Playback

In order to playback and test DVDs and to preview your projects with DVDExport, you must have a DVD Decoding system installed in your computer. ASTARTE DVDExport does not include a DVD or MPEG playback card. Installing such a card, normally requires an available PCI expansion slot in your PC.

Computer Display

A video card and monitor capable of displaying at least 1024 x 768 pixels at Thousands of colors. (1280 x 960 at Millions of colors is preferred.)

A second video card and monitor is handy when working on complex projects. You can put secondary windows (like the Cast Menu) on the second monitor, leaving more room on your main monitor for the Score WIndow and the Stage.

Hard Drive Capacity and Performance

You will want to have large amounts of available hard drive space. We recommend at least a 9 GB drive to start with.

Since a DVD can hold up to about 9 GB of data on each side (using two layers), you could need that much for your finished project, plus at least an equal amount for your source files.

Although DVDExport does not require fast drives, multiplexing will be faster if you have faster drives. It also helps performance to have two or more drives (actual drives, not just partitions). For example, if you store the source assets and the final multiplexed files on separate drives, multiplexing speed increases significantly. The optimum configuration is to have three drives; one for video assets, one for audio assets, and the third for the finished DVD files.

Video Creation/Editing Software

Since ASTARTE DVDExport is not a video/audio editing application, you will need applications for creating your source files. Popular tools for video and audio editing are Adobe Premiere™, Apple's Final Cut Pro® or Avid Media Composer™.

Source material for DVDExport starts out as video, created in popular applications like Adobe Premiere.

Removable Storage

When the time comes to create your final DVD, you will need some way to get your data to the service bureau.

There are three common methods for getting your data onto a DVD:

- Put the data on a separate hard drive and take the hard drive to a service bureau for writing to a DVD-R or pressing on a DVD disc.

- Write the project to a DLT tape (using the included DVD recording software) and deliver that tape to your service bureau.

- Write it directly to a DVD-R disc using a DVD-R recorder and the software provided.

MPEG Encoding System

Typically, the video material on a DVD is encoded in MPEG-2 format and the audio in either MPEG, PCM, or AC-3 formats. The video encoding can be done with either software or hardware. Software solutions tend to be much less expensive, but they may take a long time to encode your material (up to 60 minutes for each minute of video). Hardware systems, which encode your material in real time, cost between $5,000 and $100,000.

- You can use any MPEG encoder that produces DVD-compliant streams.

- DVDExport for the Macintosh includes a software-based MPEG encoder, called ASTARTE M.Pack, which makes it easy to convert your QuickTime movies into files that are ready for DVDExport.Expert-DVD

- DVDExport for Windows includes a a software-based MPEG encoder, from PixelTools™, called Expert-DVD.

Installing DVDExport

To install the DVDExport software:

1) Insert the installation CD into your CD-ROM (or DVD-ROM) drive.

2) Read the *READ ME FIRST* file for any late-breaking news.

3) **Mac users** - double-click the *DVDExport Installer* icon to launch it.

   Windows users - run the application SETUP.EXE

4) Follow the on-screen instructions.

5) If you plan to follow along with the Tutorial portion of this manual, you can copy the *Tutorial ƒ* folder from the CD to your hard drive (the Tutorial assets can also be used directly from the CD, although it will be slower).

What Gets Installed

The DVDExport Installer installs the following items:

- The **ASTARTE DVDExport Xtras** in the DVDExport folder into the Macromedia Director Xtra folder.

- The **M.Pack** or **Expert-DVD** MPEG encoding application with its electronic manual in Adobe Acrobat format

- Qualified DVD recording software

- The electronic version of this manual

The Serial Number

The first time you run DVDExport, you will be asked to enter your serial number. The number can be found on the registration card which came in the package.

> *If you do not enter a serial number, DVDExport can be used in evaluation mode for seven days.*

Technical Support & Updates

Support for DVDExport is available by telephone or e-mail directly from ASTARTE.

If you encounter any difficulty in the setup or operation of DVDExport, please contact one of our support offices so we can assist you.

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Product Updates

Be sure to register your software by returning the registration card or registering on-line (http://www.astarte.de/dvd) so we can notify you of major upgrades as they become available.

Maintenance updates are posted on our web site.

Overview of DVD Creation Process

Before we get into the details of using DVDExport, it might be useful to understand the overall workflow. Developing a DVD is a creative process; as such, it's difficult to write a manual that explains how to do it. Consequently, in this manual we will focus primarily on the mechanics of the process; you get to provide the creativity.

There are four phases to the DVD creation process:

- Creating your source material
- Encoding audio & video to compatible formats
- Authoring
- Disc creation

DVDExport is directly involved only in the authoring phase, but it's important to be aware of the entire process as you begin.

Creating Source Material

The first part of the DVD Creation process is to create or assemble your source material. This might mean shooting video, recording voice or music tracks, designing graphics to be included, and planning the general functionality of your project. If you are converting an existing video program into a DVD, it is simply the process of gathering your original video and audio material and designing graphics for the menus that will weave them together.

You can use whatever tools you prefer for creating your video and audio material, as long as the resulting files are compatible with the MPEG encoder that you plan to use. In most cases, your video and audio assets will be created and saved as QuickTime movies or standard sound file formats like AIFF, WAV, or Sound Designer.

Your program material should be completely "edited", including any special effects, audio fades, and scene transitions before encoding.

Depending on the specific structure of your project, you may have a small number of long video tracks, or you may have numerous shorter tracks.

For creating the menu graphics, you can use Director's graphic tools, or a separate application like Adobe Photoshop, which can import images from nearly every other graphics application.

Quality In = Quality Out

The single most important thing to remember about preparing your assets is to **always use the highest quality settings that you can**. DVD is very high quality and will reveal flaws in your material much more quickly than any other medium.

DVDExport does not improve or degrade the quality of your source material in any way; if you give it good quality input, you'll get good quality output.

Here's some guidelines to help you keep the quality up:

- Capture and edit your video material in the same resolution that you will ultimately use on the DVD (typically 720 x 480 for NTSC or 720 x 576 for PAL).

- When recording and editing audio, use 48 kHz sample rate and no compression. If your audio tools don't support 48 kHz, then 44 kHz is a workable alternative. (*The finished sample rate must be 48 kHz or 96 kHz after encoding.*

- When saving your video material to QuickTime format, specify either **no compression** (requires lots of disk space) or use a high quality compression codec like DV or Motion JPEG.

Encoding Audio & Video

Before video or audio material can be used in a DVD, it must be prepared in one of the formats defined in the DVD standard. This usually means MPEG-2 format for video and MPEG-2 or Dolby AC-3 format for audio files (although you can also use standard PCM audio formats).

> *The DVD format also accepts the older MPEG-1 format. Because MPEG-1 is about one quarter the resolution of MPEG-2 (352 x 240 as opposed to 720 x 480 for NTSC or 352 x 288 vs. 720 x 576 for PAL) and utilizes much lower data-rates, the quality is significantly lower. However, MPEG-1 is especially useful for very long programs where picture quality is not of primary importance. Using MPEG-1 encoding, you can fit many hours of material on a single DVD.*

MPEG encoding greatly reduces the size of your source material, by performing extremely complex calculations on the data to determine what can be safely "thrown away" without impacting the apparent quality. MPEG encoding can produce files that are less than 10% the size of the source files, while still looking great.

DVDExport includes a copy of ASTARTE M.Pack or PixelTools Expert-DVD, which are software encoders that you can use to prepare your material for DVDExport. Because these are software-based encoders, they take a long time to encode; up to 60 times the length of your source material to encode in MPEG-2 format.

If you are working on longer projects, or have many assets to encode, you might want to consider a hardware-based encoder which can encode directly from a video source in real time.

For programs with sophisticated sound tracks, you will probably want to invest in a Dolby-certified AC-3 encoder (such as ASTARTE A.Pack). An AC-3 encoder may be used to prepare multi-channel surround sound tracks for inclusion on a DVD, as well as for stereo or mono sound tracks.

DVDExport requires "elementary" streams. This means that the audio and video information is contained in separate files (streams). You can use any source encoder you prefer, as long as it creates "DVD compliant" elementary streams.

DVDExport cannot use multiplexed System, Program, or Transport streams. DVDExport also only supports one audio stream for each video stream!

Authoring with DVDExport

The role of DVDExport is to orchestrate your linear video and audio material and graphics into an interactive DVD-Video, complete with menus, buttons, and sound.

DVDExport gives you complete control over your DVD.

You can easily create menu screens, add buttons, and specify the actions which occur when the buttons are activated. Powerful linking can be defined with just a few clicks.

Authoring in DVDExport consists of these basic steps:

- Importing your graphic assets into Macromedia Director's cast
- Creating one or more menu screens to define the structure and navigation foundation of your DVD.
- Adding buttons to your menus. Each menu can have up to 36 buttons. Each button can either open a different menu or it can play a track,. This hierarchy of menus and buttons gives tremendous flexibility in the construction of "interactive" programs where the viewer has numerous options to choose from.
- Linking your video, audio and optional your QuickTime preview files.
- Creating one or more tracks, each consisting of one video stream with a related audio stream.
- Setting up the various actions and links that make your project "run". This is done using easy pop-up-menus.
- Testing your DVD's future behavior.
- Building the completed project as a set of files on your hard disk.

✓   *DVDExport is not a video or audio editing tool. All source material needs to be completely edited before encoding.*

Disc Creation

DVDExport does not actually write DVDs. The final output of DVDExport is a set of files on your hard disk, stored in a folder named "VIDEO_TS". The contents and structure of this folder are strictly defined in the DVD standard. When you "build" your project within DVDExport, it multiplexes[1] all the material you've included and writes it to this special folder. If you have a DVD playback application which can play a VIDEO_TS.IFO file, you can actually open and play the contents of the DVD from your hard disk.

When you are ready to actually put your project on DVD, you have several options:

- **DVD-R:** If you have a DVD-R drive, you could write the VIDEO_TS directory directly to a DVD. The resulting disc will be playable in any standard DVD-Video player, and could also be sent to a replicator as your "master".

- **DVD-RAM** or **DVD-RW:** Alternately, you could copy the VIDEO_TS directory to a DVD-RAM or DVD-RW disc, and send that to a service bureau or replicator who could write a DVD for you. (*DVD-RAM and DVD-RW discs are not currently playable in* DVD-Video *players; they are suitable only for transporting the data.*)

- **Hard Disk:** Or you could simply send your entire hard drive to a service bureau or replicator.

- **DLT:** Using the provided DVD recording software, you could write the VIDEO_TS directory to a DLT tape, which could then be sent to a service bureau. DLT is well suited to transporting DVD projects because of its very high capacity. (Remember, a completed DVD could be up to 17 GB in size!)

Now that you know a bit more about the DVD authoring process, let's dive in to the actual creation of your first project.

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1. the process of combining the separate audio, video and menu data into synchronized data ready for playback on a DVD player.

SETTINGS & WINDOWS

This section of the manual describes the function of each window, menu and button within DVDExport.

DVDExport Palette

You open the palette by selecting **ASTARTE DVDExport** from the **Xtras** menu.

The palette contains buttons for all the primary functions of DVDExport.

Opens the settings dialogs for the entire disc

Opens settings for the **selected button**.

Opens settings for the Marker/Menus.

Opens the simulation mode for testing

Compiles the project into a finished DVD structure

Displays information about DVDExport
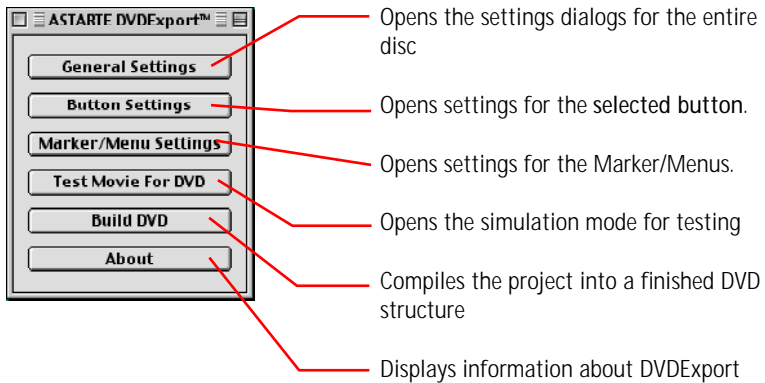
General Settings Window

The **General Settings** window holds settings which affect the entire disc, including the language, startup action and assignment of the functions of the remote control buttons.

Set the **Startup action** here

The project's **language** is selected here.

Menu button

Title button

These menus assign the functions of the standard remote control buttons.

Track button

Audio button

Up button

Left button

Right button

Down button

OK button

Records the specified settings in cast member's script.

Closes the

Each of the *button assignment* menus contain a list of all the menus and tracks which you've defined in your project. Any menu or any track can be assigned to any button.

The action menus always include all your menus and all your tracks.

To see tooltips for any icon in DVDExport, hold down the Command key (Mac) or Control key (Windows) while moving the cursor over the icon.

Button Settings Window

The **Button Settings** window allows you to specify what action occurs when a button is activated, which button is highlighted "next" when the arrow buttons are pressed on the remote, and how the button looks when it is selected or activated.

The cast member's **name**

The button's **jump action** is set here.

Set the cast member for the **Selected** state.

Set the cast member for the **Activated** state.

The **button links**, which define the "rollover" order are set here.

Records the specified settings in cast member's script.

Closes the setting window.
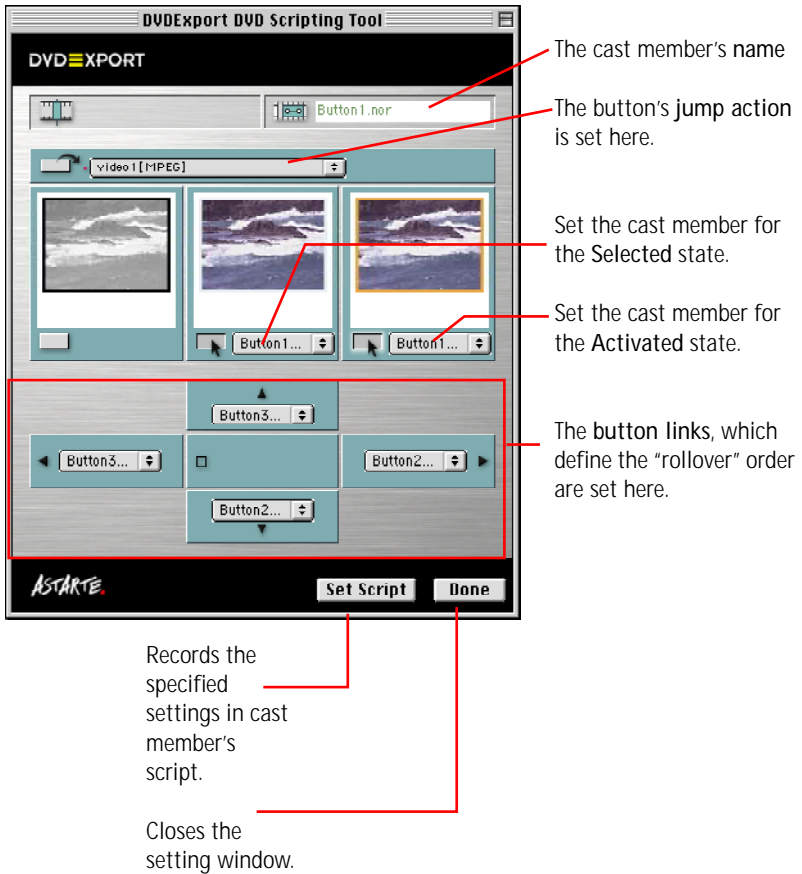
Marker/Menu Settings Window

The Marker/Menu Setting window holds settings for a specific menu. The menu must be selected in the Score before invoking the Marker/Menu Settings command from the Palette.

Sets the **Current menu**

Sets the **Default button** for this menu

Sets a **Timeout action**, if desired.
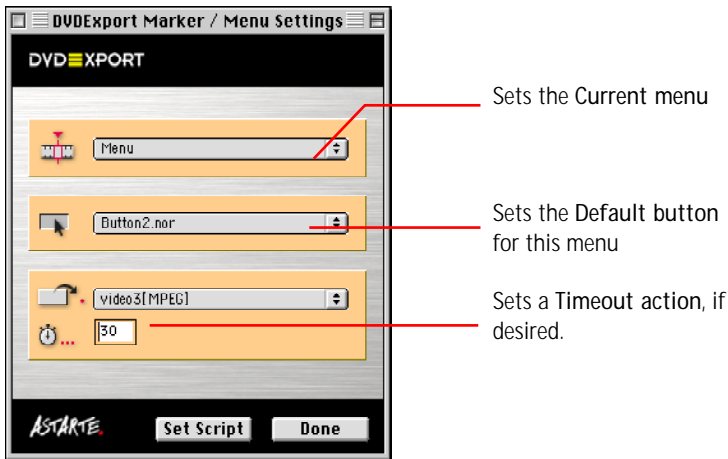
You specify the *current menu* (the one that will be display when the viewer presses the *Return* button on their remote) by choosing a **menu** from the pop-up. Do *not choose a track as the current menu.*

Set the desired current menu.

You set the *default button* by choosing from the pop-up.
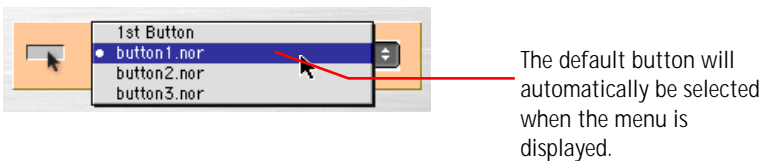
The default button will automatically be selected when the menu is displayed.

The default button is the one that will automatically be selected when this menu is displayed while playing your project.

You can use the **1st Button** choice, which refers to the button with the lowest number in the Score, or **pick a specific button** from those you've defined on the menu.

If desired, set a Timeout Action for the menu. Choose the menu or track which you want automatically played, and enter the desired delay time in the edit box (the maximum timeout value is 254 seconds).

The item selected in this pop-up will run after the amount of time set here.
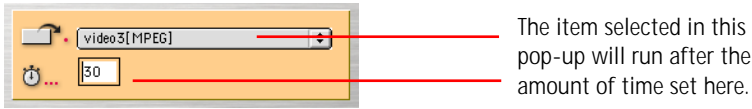
MPEG Link Asset Window

The **MPEG Link Asset Window** is used to define which video and audio assets are assigned to a particular track, as well as specifying what happens when the track is finished playing.

The name of the selected file will be displayed here.

Specify the **Video Stream**

Specify a QuickTime movie to be used as a **Stand-in** during preview (optional)

Specify the **Audio Stream**

Specify a **timeout action** to occur after this track plays, and enter the desired **delay** (in seconds)

Allow or deny **User Operations**

Jump After Playback setting.

Specify what you want to occur *after the track is done playing* by choosing from the **Jump After Playback** pop-up menu.

Choose what you want to happen after the track has played.
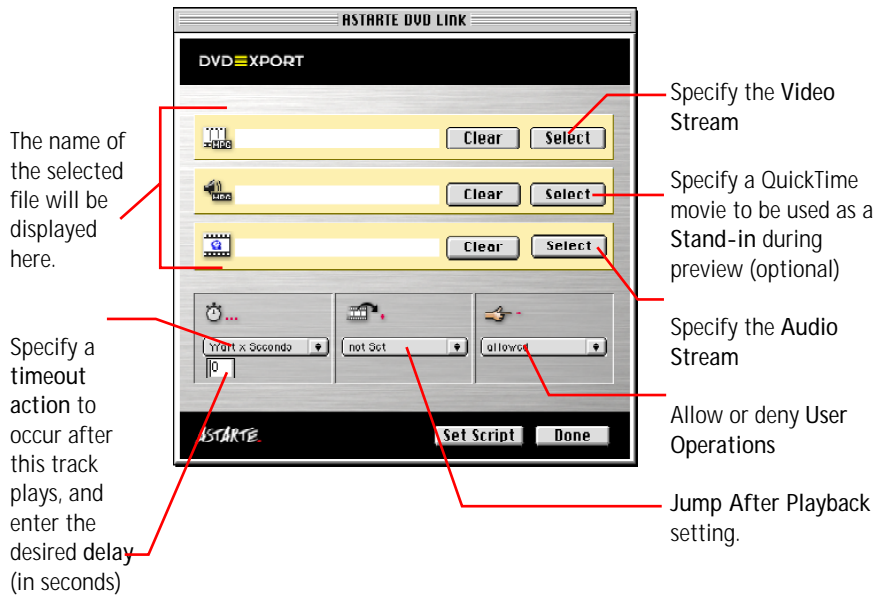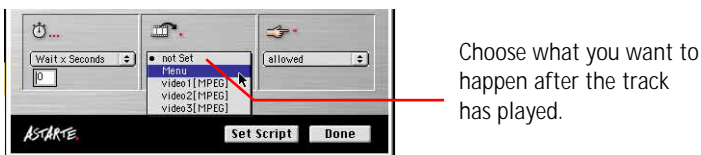
DVDEXPORT TUTORIAL

Deciding on a Structure for your DVD

In this section of the manual we will go step by step through the creation of a simple DVD. Using source material included on the DVDExport installation disc, you can build the project yourself.

Study Existing DVDs

If you've ever watched a movie on DVD, you know that there are many different approaches to organizing the various material on the disc. Some DVDs have very simple structures, similar to an audio CD, where you advance through the tracks using the remote control. Others have elaborate navigation structures with menus for every conceivable option; such discs might let you jump to a specific scene of the movie, switch to alternate sound tracks with different "mixes", display subtitles in numerous languages, and choose between standard and widescreen versions of the video material. Some discs start playing automatically when inserted into a player, others wait for user interaction before beginning.

DVDExport gives you the flexibility to create discs like these and more; it gives you freedom to organize and present your material in the way you want. But like the blank page presented by a desktop publishing application, this flexibility presents a challenge too: what will you put on your disc? and how will you organize it? An easy way to understand the range of possibilities is to study DVDs created by major studios and see what choices they made.

If you haven't done so already, go out and buy some commercial DVDs and watch them. Notice how they are organized and how you have to interact with them to get to the material you want to view. Pay special attention to the on-screen buttons, observing how their appearance changes when you select them. Note what happens when you press the various buttons on your DVD's remote control (i.e. Menu, title, etc.).

> *Motion menu screens, multi-angle titles, subtitles and multiple audio tracks are not supported in DVDExport.*

Questions You'll Want to Ask

Before you begin creating your first DVD, you need to decide (at least generally) what you will put on it and how you want it organized.

Here are some questions that need to be answered before you can complete your DVD:

- How long is the video material you want on the disc?
- Is it one continuous program (like a sales presentation), or does it have logical units, scenes, or chapters (like a movie or a training program)?

- Do you want the user to be able to jump randomly from place to place, or would you prefer to "guide" them through the entire program?

- Is there supplemental material you want to include that is subordinate to the main video (background information, reference material, etc.)? How do you want your viewer to be able to get to such information? Will you want menus that allow them to choose, or will they have to watch the program in sequence to get to it?

If you have the answers to these questions in mind, it will be much easier to construct your project in DVDExport and it will help illuminate which choices to make in situations where there might be multiple options.

As we said earlier, DVDExport gives you the tools, but you have to bring the creativity.

How Will Your User Navigate?

Before you can decide how to structure the menus and buttons in your project, it's important to understand the basics of navigating a DVD-Video.

DVD-Videos are built from just a few basic "building blocks":

- Tracks - which contain video and audio information

- Menus - which contain navigation buttons

- Buttons - which can can do one of two things: display a different menu or play a track.

DVDExport gives you great flexibility in how you can combine these building blocks. You can design a DVD that gives your viewer many choices about what they see and how they see it, or you can be much more restrictive and force them to follow a path that you choose.

Menus and buttons are the primary mechanisms that allow your viewer to choose their path through the DVD. The viewer sees the buttons on the screen and selects the one they want.

Since set-top DVD-Video players don't usually have mice or pointing devices, there is no such thing as "clicking" on an on-screen button in a DVD. All navigation, including selection of the

buttons and confirming the choice is accomplished using the standard keys on the remote control.

The "standard" remote control buttons.

The functions of these keys can be specified within DVDExport.
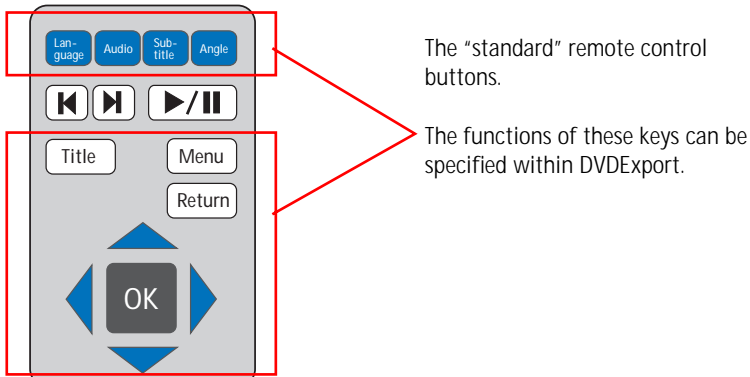
The four "arrow" keys and the OK/Enter key are the most important, since they are used for selecting buttons on a DVD's menus.

To activate a button the viewer uses the arrow keys to move the highlight to the desired button, then press the OK key to confirm the choice.

Menus & Buttons

How you make your menus and their buttons look is completely up to you. There are no hard and fast rules about how a button should look when it's highlighted or activated. You might add a bright-colored outline around the button, or add a shadow, or change it's color or appearance completely.

Here are some further examples of how you might use graphic effects in Photoshop to modify the look of your buttons to "express" their current state:

Plain button

Checkmark added

Embossed effect

Border
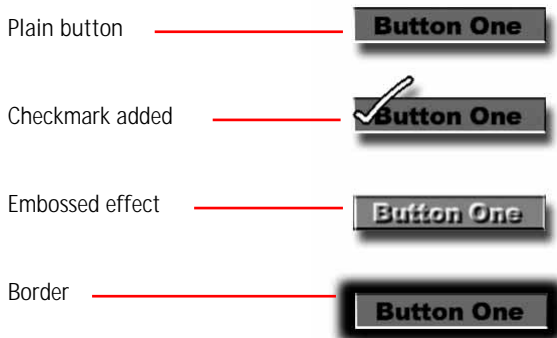
Button Links

The buttons on an individual DVD menu are "linked" during the authoring process to specify which button becomes "active" when the user presses each of the various remote control keys. (This linking is described in detail in "Button Settings" on page 40).

When designing your menus and buttons, think about how the viewer will use their remote control to access each button and menu. In particular, try to anticipate what they will "expect" to happen when they push each key on the remote. For example, if a menu button near the top of a menu is currently selected, and the viewer presses the "down" key, they would probably expect a button below the current one to become selected.

How the buttons should be linked to each other is not always obvious.

In this example, it's fairly obvious that when the "right" key is pressed, the highlight should move to this button.
But what if the "up" key is pressed?

Creating Your First DVD Video

This chapter will lead you through the process of creating a simple DVD in step-by-step instructions.

You will find the files used as well as the finished project on the DVDExport CD ROM in the Tutorial folder.
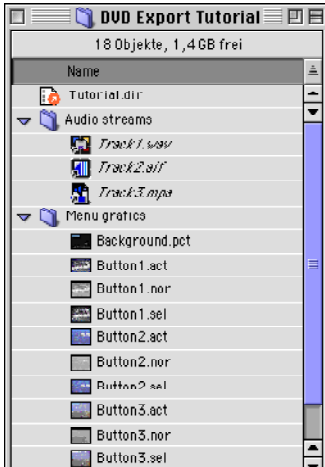
Creating a new project

> *Mac users: be sure to increase Director's memory allocation to at least 48 MB before beginning.*

1) Start Macromedia Director.
2) First you need to specify the properties for the project.

a) Choose the Movie **Properties** command from the **Modify** menu.
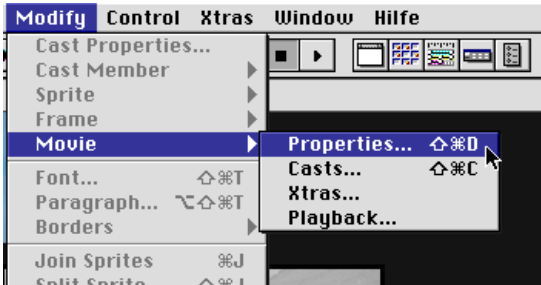
b) Set the **Stage Size** to match your video material (*720 x 480 for NTSC or 720 x 576 for PAL format.*)
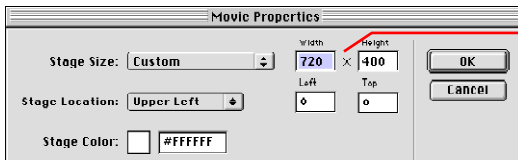
Set the Stage Size to match your material.

c) Click **OK**.

Accepted formats in DVDExport

The background graphics for your menus must be the same size as your Stage, which in turn must match your video material. This chart shows the correct formats for the graphics, video and audio material to be used in your DVD project.

	NTSC	PAL
stage size (Pixel)	720 x 480	720 x 576
frame rate (FPS)	29,97	25
aspect ratio	4:3	4:3
audio resolution (Bits)	16 or 24	16 or 24
audio sample rate (kHz)	48	48

Importing the Cast members for Your Menus

The background graphic as well as the images for the three possible different states of each button (normal, selected, activated) have already been created in Adobe Photoshop® and saved as PICT or .BMP files. They must be imported into your project before you can use them.

1) Choose the **Import...** command from the **File** menu.
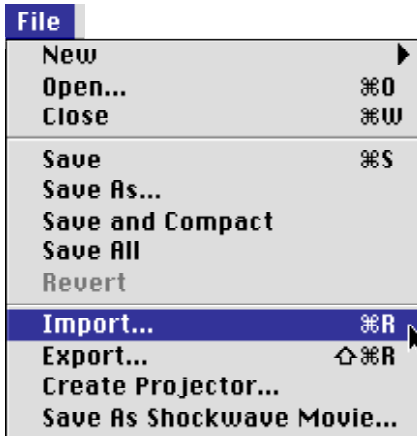
2) In the Import dialog box, navigate to the *Menu Graphics* folder and click the **Add All** button to add all the graphics to the import list, then click **Import**.
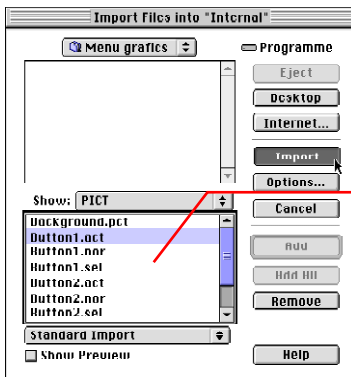
Add all the menu graphics to the Import list

3) The selected items will be added to the *Cast* of your project.
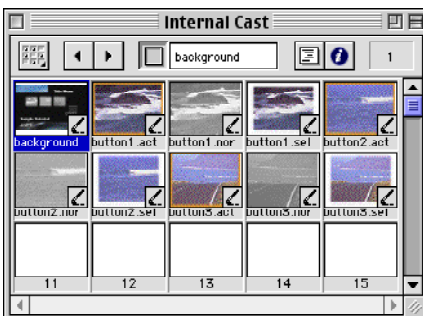
Creating Menus & Buttons

After importing the graphics you can create your first menu.

1) Activate the first cell in the first channel of the score and drag the background cast member on to the stage.
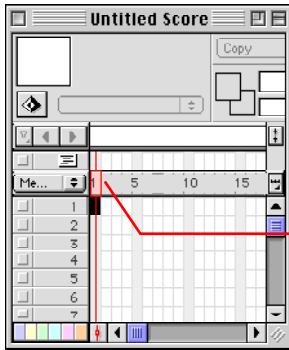
Select the first cell in the first channel, then drag the background cast member onto the stage.

2) Next, drag the cast members for the Normal state of each of the three buttons onto the Stage.
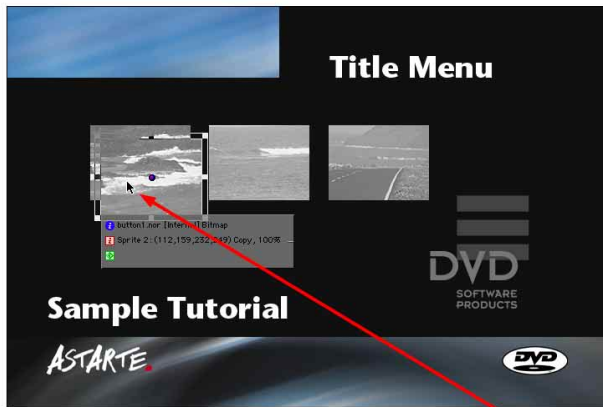
Drag the background image to the stage, then drag each button into position.

✓ ──
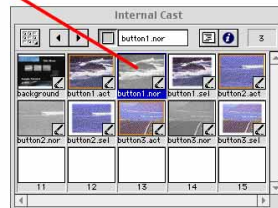
> The background always has to be in the first sprite channel of the
> score!

───

3) Now create a new marker for the menu in the Score and name it "Menu".
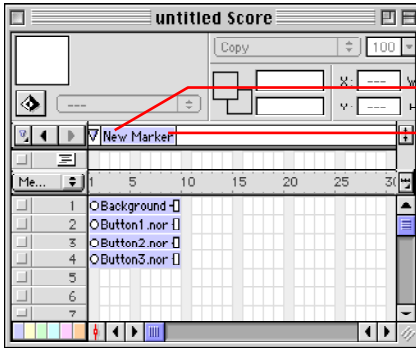
Click here to add a marker
for your menu.

Type the name "Menu".

4) This is a good time to save your project and give it a name. Make sure to save often.

Defining a Track

Since Macromedia Director can't currently manage or display MPEG-2 files, DVDExport adds
a new type of cast member called a *MPEG Media Link Asset*. This special cast member contain
information about the video and audio stream that you want to assign to a particular track.

You will insert one of the MPEG Media Link Assets for each track in your project.

1) From the Insert menu choose the MPEG Media Link Asset command.
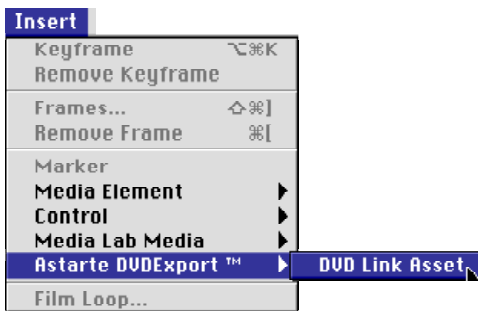
2) A new cast member will be displayed in the cast window.
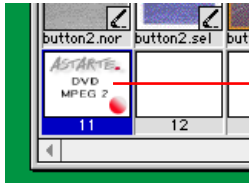
The new link asset is added to the Cast.

3) In the score mark sprite channel 1 at a point beyond the menu images.
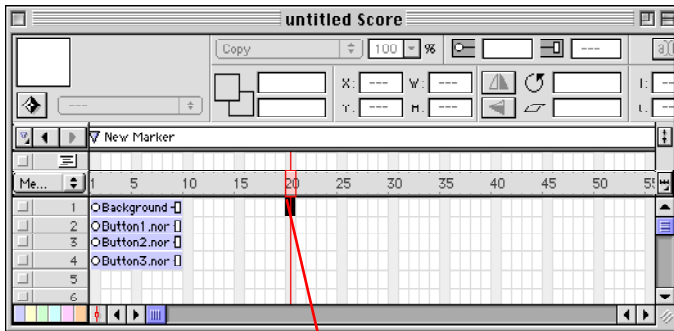
Mark a location for the track.

4) Drag the new cast member onto the stage.
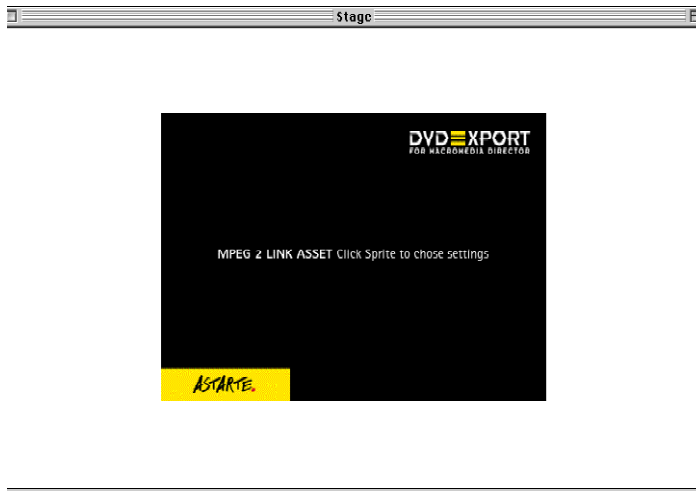
5) DVDExport creates a new marker that corresponds to the new track and gives it's name the extension [MPEG]. Add "Video 1" to the marker's name, but be sure to leave the extension.
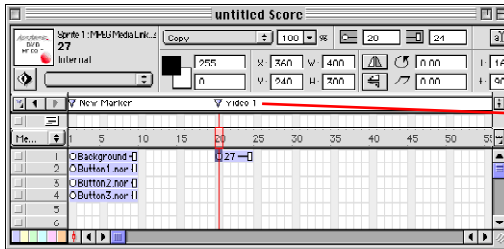
Name the marker for the track. The "[MPEG]" extension is created by DVDExport.

6) Repeat these steps to add *MPEG Media Link Assets* and Markers for two more tracks, naming them Video 2 and Video 3 respectively.

Linking the MPEG assets

Now you will need to assign particular video and audio files to be used for each the three tracks which you've defined.

1) Open the *MPEG Link Dialog* for the first track by double-clicking the corresponding Link Asset in the score.
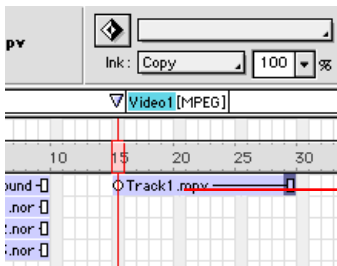
Double-click a Link Asset to edit its properties.

The MPEG Link Dialog is used to define which video and audio assets are assigned to a particular track, as well as specifying what happens when the track is finished playing.

Specify the Video Stream

Specify a QuickTime movie to be used as a **Stand-in** during preview (optional)

Specify the Audio Stream

Allow or deny User Operations

Choose what should happen after this track is played.

Specify a timeout action to occur after this track plays.
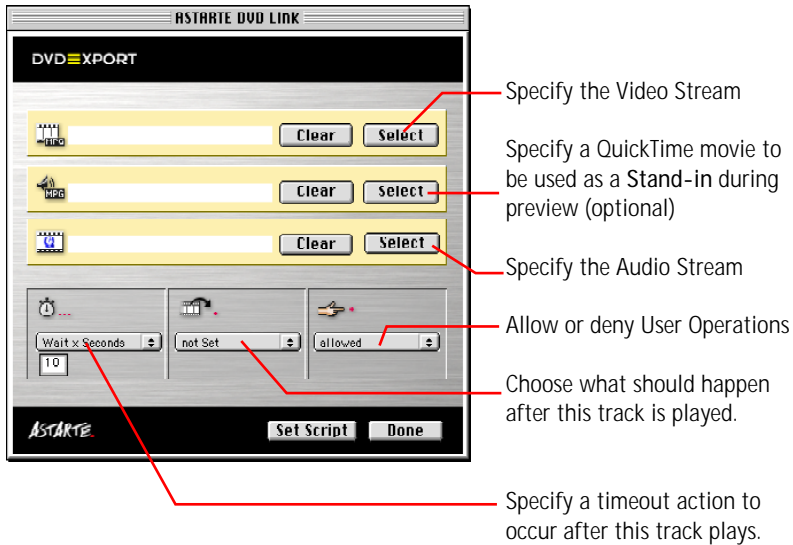
2) Click the upper **Select** button for to link the video file. Find the folder *MPEG Streams NTSC* in the *Tutorial* folder and choose the file **Track1.mpv**.
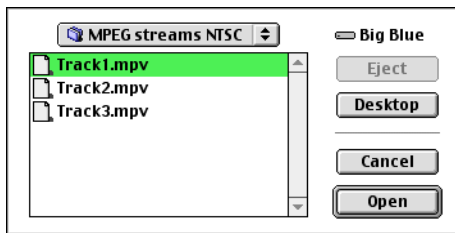
3) Now specify the Audio audio file which will be used for this track by clicking the Audio Stream Select button and choosing **Track1.AC3**.

4) Specify what you want to occur *after the track is done playing* by choosing from the **Jump After Playback** pop-up menu. In the case of our sample project, we will set all tracks to jump back to the Menu.

Choose what you want to happen after the track has played.
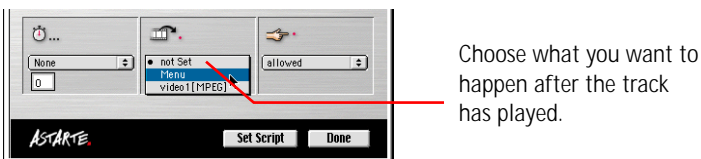
✓ *You should not rename the markers in your project after they are assigned,
as DVDExport may not be able to find them.*

5) Finally click on the "Set Script" button.

DVDExport will prepare a special Lingo script that defines all the properties of this
track and add it to the project. At the same time the marker for the track will
renamed to include the suffix [MPEG].

! *The extension "[MPEG]" should **never** be changed, or the DVD Video will not
build properly.*

6) Close the MPEG Link Asset window by clicking the **Done** button.

Repeat this process to link the video and audio files to tracks two and three. When
finished, your score should look something like this.
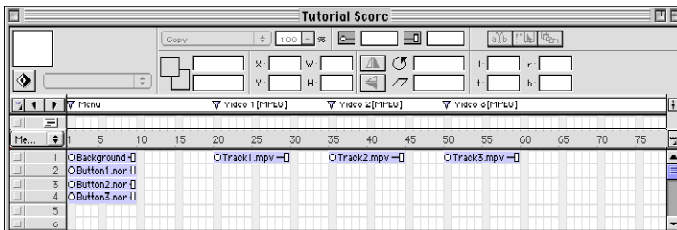
✓ *It is not important how many cells of a channel are used by the background,
buttons or tracks in the Score window. You can use one or more, as you
prefer.*

DVD Video settings

Next we need to define some DVD specific parameters for the project using commands from
the DVDExport palette.

1) Open the DVDExport palette by selecting **ASTARTE DVDExport** from the **Xtras** menu.
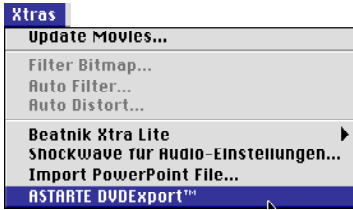
2) The DVDExport palette will open. Move it to a convenient location on your screen.

The palette gives you easy access to the settings of your DVD-Video.

General Settings

DVDExport lets you specify the functions of the standard DVD remote control buttons within your project. You can also set the startup action for the disc and indicate the language of the content. These settings are made in the *General Settings* window.

1) Click the **General Settings** button in the DVDExport palette.

2) The Settings window will open.
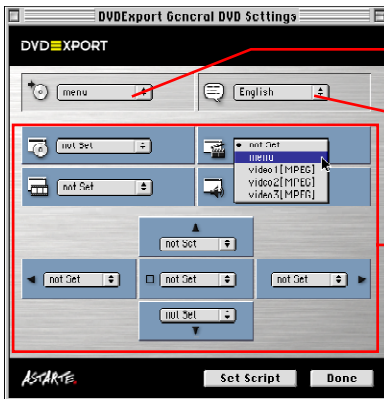
Set the Startup action here

The project's language is selected here.

These menus set the functions of the standard remote control buttons.

With the exception of the language menu, each of the pop-up menus in the Settings window list all the menus and tracks which you've defined in your project.
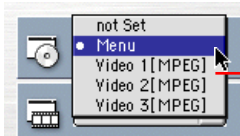
The action menus always include all your menus and all your tracks.

This allows you to assign any menu or track to be the startup action or to any of the buttons.

3)   Set the **startup action** by choosing Menu from the upper-left pop-up.

4)   Now set the discs' **language** to English using the upper-right menu.

Set the language of your project.

5)   On a normal project you would probably assign the *Menu*, *Title*, *Track* and *Audio* buttons each to different menus or tracks, but for our simple project, we'll just set them all to jump to our single menu.

Set each of these to jump to the **Menu**.

The arrow keys on the remote will be left unchanged in our Tutorial. You can, however, assign them individually as well.

6)   After you've made all your settings, click the **Set Script** button and close the window by clicking the **Done** button.

Button Settings

Now we need to define how each of our three buttons look and act.

1) Select the first button (*either in the Score or on the Stage*), then click the **Button Settings** button on the *DVDExport palette*.

The button settings dialog will open.
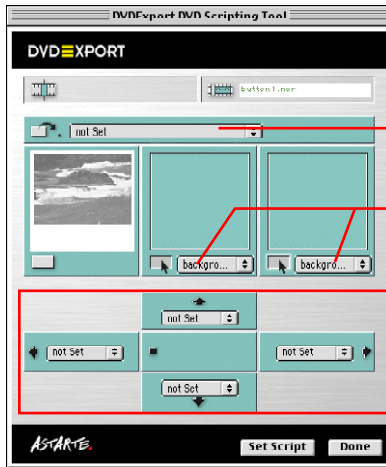
The button's jump action is set here.

The cast members for the button's alternate states are set here.

The button links, which define the "rollover" order are set here.

To indicate what happens when a button is activated during playback, you specify its **Jump Action**.

2) Choose the track **Video 1[MPEG]** from the action menu.

Next you choose the cast members which will represent the Selected State and the Activated State of the button.

3) Choose **Button1.sel** from the center pop-up and **Button1.act** from the right pop-up.
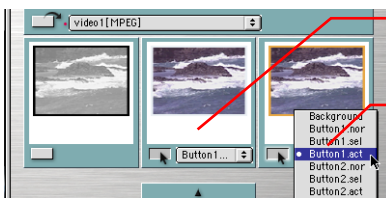
The **Selected** state is set/ shown here.

The **Activated** state is set/ shown here.

The final step is to determine which button "comes next" in the selection order when each of the arrow keys on the remote are pressed. Since we are making settings for our *first* button, we want button *two* to be selected next (*when the right arrow key is pressed, for example*).

4) Set the *up arrow* and the *left arrow* to jump to **button 3**, and the *down arrow* and the *right arrow* to jump to **button 2**.
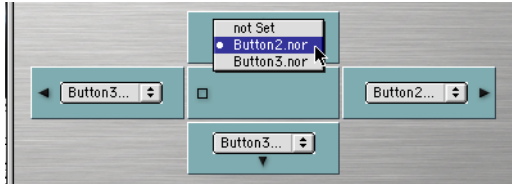
Assign the *next* button in each direction using the pop-ups.

5) Click the **Set Script** button and close the window by clicking the **Done** button.

Menu Settings

Each menu on a DVD has its own properties. You can choose which button you want selected when the menu is first displayed, and if you want anything to happen automatically after a predefined time-out period.

To change the settings for a menu:

1) Select the menu in the Score

2) then click the **Marker/Menu Settings** button in the palette.

The Menu Settings window will open.
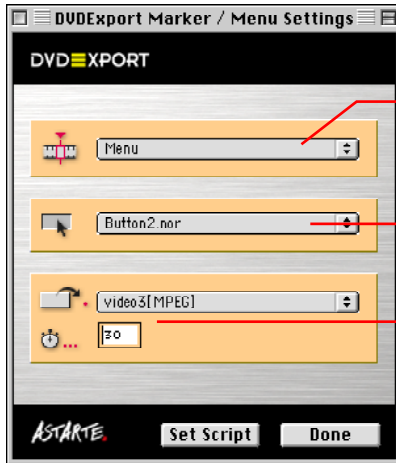
Sets the **Current menu** (doesn't apply, since we have only one menu).

Sets the **Default button** for this menu

Sets a **Timeout action**, if desired.

3) You can specify the *current menu* (the one that will be display when the viewer presses the *Return* button on their remote) by choosing a menu from the pop-up.
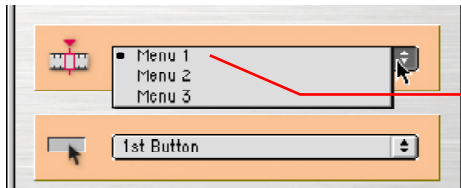
Set the desired current menu.

4) Set the *default button* by choosing from the pop-up.
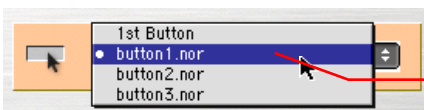
The default button will automatically be selected when the menu is displayed.

The default button is the one that will automatically be selected when this menu is displayed while playing your project.

You can use the **1st Button** choice, which refers to the button with the lowest number in the Score, or **pick a specific button** from those you've defined on the menu.

5) If desired, set a Timeout Action for the menu. Choose one of the three video tracks available and set the value to activate the time out to 30 seconds (the maximum timeout value is 254 seconds).
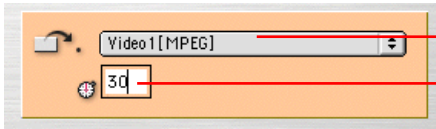
The item selected in this pop-up will run after the amount of time set here.

6) Click the **Set Script** button and close the window by clicking the **Done** button.

DVD Video testing

DVDExport features a *testing mode* which lets you verify the proper functioning of your menus, buttons and the links to each track.
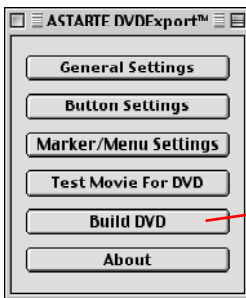
Click to test your project

1) In the DVDExport palette, click the **Test Movie for DVD** button.

2) DVDExport checks all scripts and MPEG links for errors. If an error is detected a detailed error message will be displayed that describes the problems, otherwise the

DVDExport remote control will be displayed and your specified startup action will occur (in this case, the menu screen is displayed).

The remote control is used to play your project, simulating how a viewer would interact using the standard remote control for their DVD player.

You can use the on-screen **Remote Control** to navigate through your project.
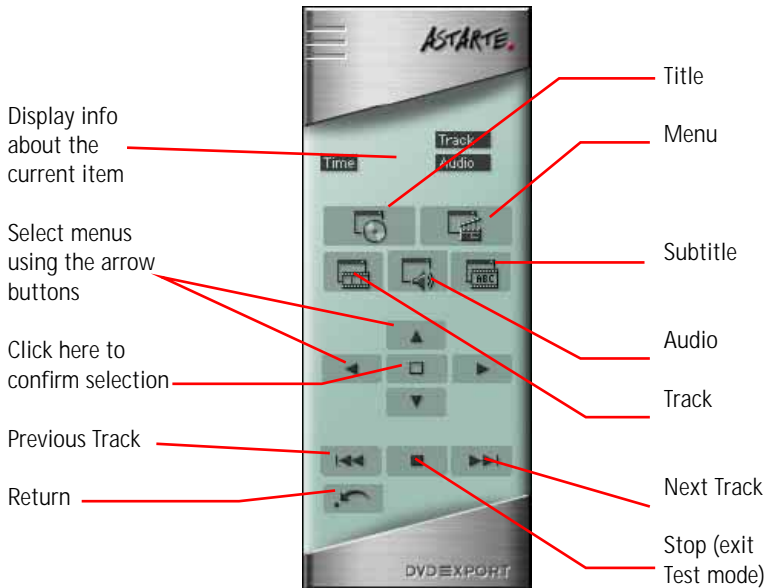
You can exit the Preview mode by clicking the Stop button on the Remote.

3) Use the remote to navigate through your project. Using the **arrow buttons** on the remote, you can **select the buttons** on your menu and click **OK** to activate your choice.

When you play a track, the DVDExport Link Asset placeholder will be shown, since Director cannot display MPEG-2 video.
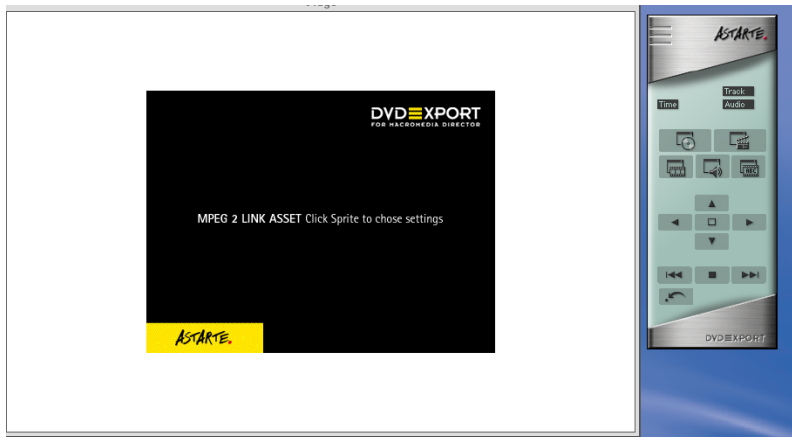
If you had assigned a QuickTime movie as a "stand in", then it would play when the track is played.

4) Return to the menu on your DVD by clicking the **Menu** button on the remote.

5) Once you are satisfied with your testing, click the Done button to exit the testing mode.

Building the DVD

Now you are only a few clicks away from your first DVD Video.

1) From the ASTARTE DVDExport palette choose the **Build DVD** option.

2) In the file dialog, **choose a location** for the completed DVD data and **specify a name** for the DVD description file which will be created.
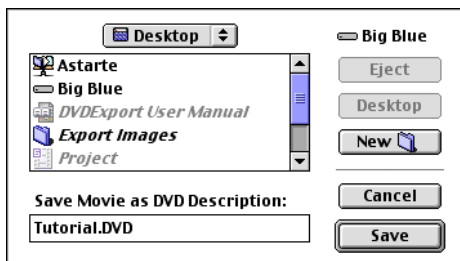
3) Click **Save**.

✓

Make sure that the selected destination has enough free disk space. It will require approximately the same amount of space as all your source files.

4) DVDExport will then build the DVD, in these steps:

    • It will check all cast members, scripts, and links to make sure they are valid and that all the linked files are available.

    • It will create multi-layer Photoshop files containing all the graphic elements of your menus and buttons and save them on your hard drive.

    • It will create a text file containing a complete description of your DVD. (*This file is compatible with our full-featured authoring tool: ASTARTE DVDirector.*)

    • Using the newly created Photoshop file and the DVD description, DVDExport will prepare the DVD-Video structure on your hard drive, in a process called *Multiplexing*.
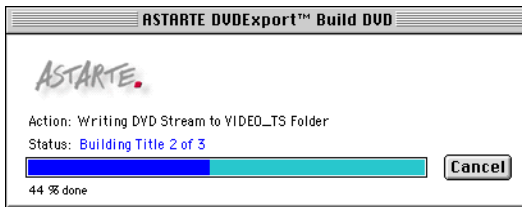
This dialog shows the Build progress.

✓

Depending on the speed of your computer, the Building process take roughly one half the length of all your video clips. For example, if you have one hour of material, it will take approximately 30 minutes to complete this step.
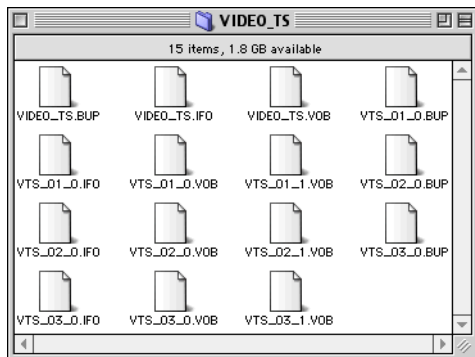
5) Once building is complete, DVDExport will ask if you'd like to retain the Photoshop files and description files which were created.

You can retain the exported files for later use.

6) If so, click **Yes**; otherwise click **Trash**.

7) Now, if you look on your hard drive at the location you specified, you'll see a directory called **Video_TS** which contains your completed DVD.

The completed DVD is ready to be put on a disc, or transferred to a pressing plant.

Checking the DVD file structure

If you have an appropriate DVD decoder solution like WiredStream DVD Decoder Card, you can now play back the completed DVD from the hard drive.

If you don't have such a card, you must first transfer the VIDEO_TS directory to a DVD-R disc, or put in on a DLT tape and send it to a service bureau for writing to a DVD.

Well, that's it. You've successfully made your first DVD-Video title.

Index